

Report to Water Pollution Control Board

August 30, 2011

TO: Water Pollution Control Board Members

COPY: Thomas Easterly, IDEM Commissioner
Bruno Pigott, IDEM OWQ Assistant Commissioner
Martha Clark Mettler, IDEM OWQ Deputy Assistant Commissioner

FROM: *Gary Powdrill*
David Wagner
(Board Appointees to Work on Draft Rule 327 IAC 2-1.3 Prior to Preliminary Adoption)

RE: Response to Comments from 7/27/11 WPCB Hearing / Amendments to Draft of Antidegradation Rule

Several tasks were completed, per the commitment to the Board at the July meeting, as part of the postponement of preliminary adoption of the draft antidegradation rule.

- The comments - written and oral - presented at the meeting were reviewed and the comments that were believed to be repetitive and common from all of those who spoke at the Board's hearing were identified. It's also noted that additional comments to the Board Appointees, per the Board's motion, were accepted until COB on July 29th and those comments were also considered.
- A spreadsheet (Attachment #1) summarizing all of the comments was developed and through that spreadsheet the "common" themes that could be addressed were identified.
- Meetings with IDEM staff were conducted on three (3) occasions to discuss recommended edits to the proposed rule, based on a list (Attachment #2) of the common themes.

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Accordingly, we submit the following report, with attachments, to provide an explanation of what we considered and how or why it was or was not addressed.

1. NPDES Permit Applicability

- a. Clarify: Antidegradation Standard covers "all" activities - Implementation Procedures applicable to NPDES Permits only

Response / Action: The attached email (Attachment #3) from EPA, Region V in response to questions posed by Ms. Mettler prior to our initial meeting after the July Board meeting is provided for your reference. EPA's position is clear that water quality standards include an antidegradation policy and implementation method and that they cannot be separated.

Accordingly, after discussion with IDEM staff, Section 1 - Applicability - was edited to reflect this and Sections 3 (Antidegradation Standard) and Sections 4 through 7 (Implementation Procedures) clearly identified. It's recognized that the majority of the implementation procedures are for NPDES Permits, as indicated by several of the commenters. We contend that antidegradation implementation procedures may need to be developed and implemented for non-NPDES programs if or when those programs are authorized or delegated.

- b. Clarity on Ag issue

Response / Action: After discussion with IDEM staff and review of supplemental comments, ... "subject to the Clean Water Act" ... was added in Applicability Section 1(b) to clarify that only those activities subject to the CWA would be covered by this rule. We believe this adds clarity since a majority of agricultural activities are exempt from the CWA.

- c. Nonpoint issue

Response / Action: As described above, we believe the addition ... "subject to the Clean Water Act" ... clarifies this since non-point sources of

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pollution are not covered to the extent that they are exempted from the CWA.

d. Applicability to Nutrients

Response / Action: The EPA email is referenced as stating in response to the third question ... *"Numeric criteria and narrative criteria identify the level of water quality that must be maintained in surface waters to protect uses and the point beyond which no further lowering of water quality is allowed. EPA considers numeric and narrative criteria to be equal and equally applicable to surface waters."*

This was discussed extensively with IDEM staff and if no numeric WQ criteria exists (e.g., narrative or nutrients) it is understood that a criteria would need to be developed. For toxics, criteria can be calculated on a site-specific basis as detailed in 327 IAC 2-1-13 and 327 IAC 2-1.5-16. For pollutants that are not toxic, IDEM indicated that they would use "Best Professional Judgment" (BPJ) in conjunction with 327 IAC 2-1-6(a) to develop effluent limits that are designed to prevent the prohibited narrative stream conditions found in 2-1-6(a)(1)(A) through (D).

2. Clarify Key Definitions

a. Approved Alternative Mixing Zone for Lake Michigan

Response / Action: Edited to be consistent with terminology in existing rule at 327 IAC 5-2-11.4(b), subsections (2), (4), (6) and (7). It is also consistent with the requirements in 327 IAC 5-2-11.4(b) for obtaining an alternate mixing zone in Lake Michigan.

b. Available Loading Capacity (ALC)

Response / Action: Edited to simplify the definition - i.e., $ALC = \text{Total Loading Capacity} - \text{Used Loading Capacity}$ and added definitions of Representative Background Loading Rate and Used Loading Capacity.

c. Mixing Zone

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Response / Action: Corrected to be consistent with existing rules - 327 IAC 2-1-9(35) and 327 IAC 5-1.5-2(57)

d. Regulated Pollutant

Response / Action: Addressed by stating it is a parameter of a pollutant and pollutant is defined in the draft rule and is defined in 327 IAC 5

e. Threatened or Endangered Species

Response / Action: Moved and changed for consistency with 327 IAC 2-9(17) and to be LSA compliant

It's noted that this definition - referencing the ESA list - may omit Indiana specific information - e.g., IDNR rules that identify:

- (1) endangered species of mammals - 312 IAC 9-3-19 - 6 species;
- (2) endangered species of birds - 312 IAC 9-4-14 - 28 species;
- (3) endangered species of reptiles and amphibians - 312 IAC 9-5-4 - 20 species;
- (4) endangered species of fish - 312 IAC 9-6-9 - 10 species; and
- (5) endangered species of invertebrates 327 IAC 9-9-4 - 15 species.

IDNR also issues "Information Bulletins" titled "Roster of Indiana Animals, Insects, and Plants that are Extirpated, Endangered, Threatened, or Rare (also described as Special Concern)". Those bulletins have been issued since 1991.

This state specific information, when different from the ESA list, can be included with the information required for antidegradation demonstration, if this information is required for an antidegradation demonstration, as described in 5(a)(4) of the draft rule. This should be further clarified in the guidance document recommended to be available when this rule is final.

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f. Total Loading Capacity (TLC)

Response / Action: - Edits to make consistent with ALC and ULC

g. Toxic Substances

Response / Action: No change as this definition is consistent with the definition in 327 IAC 2-1-9(55)

h. Deliberate Action not defined

Response / Action: Addressed in applicability in Section 1. "Activity" is used in the legislation and is used in 325 IAC 5 (e.g., 5-2-11.5 and 5.2-11.7). "Action" is also used in 327 IAC 5. The term "Deliberate Action" is used in NPDES Permits. Edits were made to use the term "deliberate activity" to be consistent with legislation and to distinguish difference from accident or single time occurrence

i. Other Definitions

Response / Action: Eliminated the definition of "Risk" as it is not used in this rule

3. Deminimus and Narrative Criteria

- a. 10% deminimus / 90% Available Loading Capacity
- b. Calculating deminimus for narrative criteria

Response / Action: An existing rule - 327 IAC 5-2-11.3(b)(1)(ii)(BB) "... *10% of the total loading capacity remaining available after the lowering of water quality*" ... - is referenced. The 90% of the benchmark is a trigger for an antidegradation demonstration.

Each new calculation uses new flow and current $Q_{7,10}$ information. The scenario in Mr. Andes' comments could occur when the water "used" is

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taken upstream of the discharge and the volume discharged is the same as the volume withdrawn and it's not clear that this could or would occur.

If the benchmark Available Loading Capacity is surpassed, a significant lowering of water quality occurs and a demonstration is required - it doesn't stop or prevent further action or development but it must be demonstrated that the activity causing the lowering is necessary and accommodates important social and economic development.

Each individual request to lower water quality must look at if the 10% de minimus loading is being used, then compare to what's remaining and if greater than 10% then it is a significant lowering of water quality and an antidegradation demonstration is required.

Calculating a de minimus for a narrative water quality criteria issue is problematic. However, if a narrative water quality criteria is determined to be a cause of lowering water quality, the entity would need to identify the causative agent for the lowering and then a numeric water quality criteria could be developed to allow calculation of a de minimus. For example, although not applicable to nutrients, site specific criteria are derived for toxics per 327 IAC 2-1-13 and 327 IAC 2-1.5-16. IDEM indicated that they would use "Best Professional Judgment" (BPJ) used in conjunction with 327 IAC 2-1-6(a) to develop effluent limits that are designed to prevent the prohibited narrative stream conditions found in 2-1-6(a)(1)(A) through (D). This could / should also be further described in the recommended guidance document.

4. Clarity on General Permits

Response / Action: Section 1.3-1(c) on general permits is from the recent legislation and what Mr. Wagner (IWQC comments) requests will be addressed in the rule making necessary for IDEM to issue the general permits, which will occur in the future

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5. Clarity on Exemptions

a. Mercury

Response / Action: The language used acknowledges the reality that mercury is ubiquitous in the environment and that entities cannot be penalized for that fact.

It also recognizes the statement in the Barnes Report (p.27) ... *"The concentration limit for mercury in Great Lakes waters is a very stringent one close to the level of detection; indeed, it is lower than the amount of mercury permitted in our drinking water. The standard is almost universally acknowledged to be difficult to meet on a consistent basis by industrial firms or municipal waste treatment plants (POTWs) that have mercury in their effluent - and in some cases the process water taken into the facility to use in the facility may have levels of mercury that exceed the legally allowable levels. These firms and municipal wastewater systems are usually not the major or even significant contributor to mercury levels in the lakes - most of it comes via airborne deposition."*

It's further noted that no net addition in permits in the Great Lakes - 327 IAC 5-2-11.6(h)(1)(A) - expired after March 23, 2007. Further, Section 3(c)(2) addresses mercury in OSRWs inside the Great Lakes Basin, BCCs in OSRWs outside the Great Lakes Basin, and non-BCCs in all OSRWs ... "full satisfaction of intergovernmental coordination and public participation and provisions in Section 5 (antidegradation demonstration) and Section 7 (water quality improvement project).

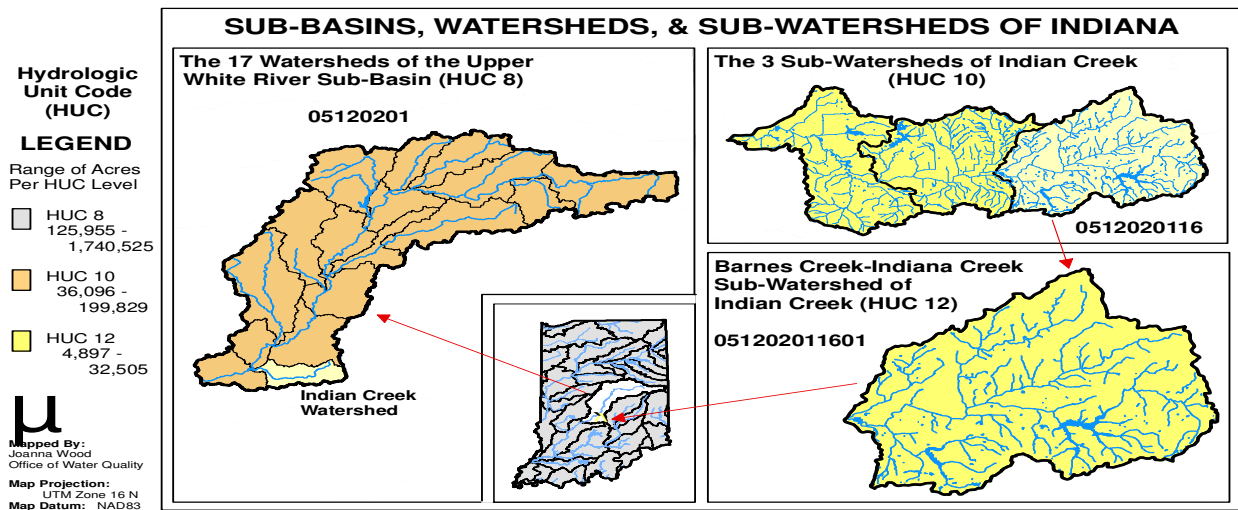
Entities are also referred to the Mercury Variance Rule and as noted in the Barnes Report (p.28) ... *"Accordingly, it is common to provide a variance from the legal limit for certain industrial permit holders ... as well as POTWs after they prepare an assessment of the mercury in their waste stream and develop - and implement - a plan to minimize or prevent (PMPP) the presence of mercury in their waste stream."*

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No action was taken other than to separate "except mercury" with commas. This could / should be further clarified in the recommended guidance document.

b. Pollutant trading

Response / Action: Exceptions are in the existing Great Lakes antidegradation rule and this is a carry-over from that rule, merely updated to reflect current thinking. There was additional discussion with IDEM about the use of the 10 digit watershed v. the existing Permit Rule language which is "body of water" - 327 IAC 5 - in the context of an "intake pollutant". It's believed that the 10-digit watershed is more definitive and narrows the situation, as illustrated below in information that IDEM has previously shared with the Board.



6. Others

a. Public meeting - when and what addressed

Response / Action: There was agreement with the comments - i.e., the entity seeking the lowering / submitting the demonstration should be allowed / required to present their rationale at any public meeting.

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Communication is encouraged and the success of an activity / project can be influenced by communication and / or lack of communication. Voluntary communication / conducting a public meeting by an entity planning an activity that may require an antidegradation demonstration should be positively recognized. Accordingly, edits were made to this section and to 327 IAC 5-11.2 to add clarity and consistency.

b. Clarification for CWA Section 316 actions

Response / Action: With the exception of ONRWs, the CWA Section 316 reviews will constitute an antidegradation demonstration for all other surface waters and no edits were made or are recommended.

7. Tributaries

Response / Action: The statement in 7-(c)(1)(B)(ii) ... "or its tributaries" ... is not in the legislation or in other parts of the rule and it was deleted

8. Barnes Report

The Board has continually asked IDEM if the four (4) recommendations in the Barnes Report (p. 29) were being addressed in the draft rule. It must be kept in mind that the Barnes Report recommendations were specific to revisions of the NPDES Permitting rule for OSRWs in 327 IAC 5-2-11.7. Barnes recommendation succinctly stated "*...to make them easier for permit applicants and the public to understand and for the agency to apply.*"

The proposed draft rule is much broader than 327 IAC 5-2-11.7, but the Board believes that the Barnes recommendations are applicable and accordingly, the rule, with the recommended edits, was reviewed to see if the Barnes recommendations were observed.

- a. When an antidegradation demonstration must be submitted - Section 5 the of proposed rule addresses this and should be further supplemented with the recommended guidance document.

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- b. The required content for such a demonstration - Section 5 of the proposed rule addresses this and should be further supplemented with the recommended guidance document.
- c. The legal standard by which the adequacy of the demonstration will be evaluated - Section 6 of the proposed rule addresses this and should be further supplemented with the recommended guidance document.
- d. The process by which the public can comment on the demonstration before the agency makes its determination concerning it in the draft permit - Section 6 of the proposed rule and 327 IAC 5-2-11.2 address this and should be further supplemented with the recommended guidance document

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Attachment #1

WPCB 7/27/11 Public Hearing on Draft Antidegradation Rule Summary of Comments / Common Themes

<u>Wagner - Taft / IMA/IWQC</u>	<u>Quinn- Sierra Club</u>	<u>Griffin - Indiana CofC</u>
Deminimus & Narrative Criteria	Hg Exemption Issue	"Need "bright line" for demonstration need
Reg Pollutant Definition	15 mile limit for mtg. request	Criteria for demonstration
Available Loading Benchmark	Prohibition on applicant rationale at mtg	Restrictive to Economic Development
Clarity on Exemptions		
Clarity on General Permits	<u>Maloney - HEC</u>	<u>Bennett - IMA</u>
Onerous Public Inf Application	Hg Exemption Issue	Clarity on Reg Pollutant
No public mtg. before Application		Clarity on General Permitting
NPDES Permit Applicability Only		When public participation occurs
New loadings analysis		Long term impact of rule
IDEM consider cost and feasibility		
Broad definition of Community (5(g)5)	<u>Hyman - Cons. Law Center</u>	<u>Trenary - Pork Producers/INPAC</u>
Clarity for water additives info	Hg Exemption Issue	NPDES Permit applicability
Definitions - see handout	Pollutant trading & size of watersheds	Definition of reg pollutant
Logical outgrowth	Need Guidance	Nutrients - narrative v. numeric
	See also notes from June mtg	Applicability to Ag Community
		Non point source applicability
<u>Miller - Rose Acres</u>		
Applicability to Ag Community		High flow v. low flow
Restrict to NPDES Permit w/limits		Deminimus standard of zero
Definition of reg pollutant		Public meeting and info presented
<u>Ettinger - Envir. Lawyer</u>	<u>Andes - B&T</u>	<u>Humes - IUG</u>
Covers more than NPDES Permits	Permit trigger - new limit v. old limit	Key Definitions need clarity
Limit to NPDES Permits	deminimus v. maintaining 90% of ALC	Clarity / certainty about implementation
Hash out limits	(more stringent than CWA)	Use of economic feasibility issue
Narrative language clarity - P as example	Hg Issue - clarity needed	316(a) variance and ONRWs
EPA won't approve if N or P exempted		Deminimus and 90% of ALC maintenance
Clarify Ag issue		
Illinois rule is more stringent		
General permit issue may need work		
Clarify public meeting portion		
<u>Wodzja - Ind. Builders</u>	<u>Schneider - Farm Bureau</u>	<u>Nelson - NW Ind Forum</u>
Comments from IWQC	Also INPAC Comments	Permitting certainty & Econ development
General permits - Rule 5 concerns	Clarity on effect on Ag	
Clarity on general permits	Nutrients and nonpoint sources issue	

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Attachment #2

Critical / Repetitive Comments from 7/27/11 WPCB Hearing to be Considered for Possible Amendment into 5/6/11 Draft of Antidegradation Rule

1. Clarify Key Definitions - 327 IAC 2-1.3-2

- a. Approved Alternative Mixing Zone for Lake Michigan (Wagner) - 327 IAC 2-1.3-2 (1)
- b. Available Loading Capacity (Humes) - 327 IAC 2-1.3-2 (2)
- c. Mixing Zone (Wagner) - 327 IAC 2-1.3-2(28)
- d. Regulated Pollutant (Wagner, Miller, Bennett, Trenary, Humes) - 327 IAC 2-1.3-2(43)
- e. Threatened or Endangered Species (Wagner, Humes) - 327 IAC 2-1.3-2(52)
- f. Total Loading Capacity (Humes) - 327 IAC 2-1.3-2(53)
- g. Toxic Substances (Humes) - 327 IAC 2-1.3-2(54)
- h. Deliberate Action not defined (Humes)
- i. Other Definitions

2. Deminimus and Narrative Criteria

- a. 10% deminimus / 90% Available Loading Capacity - 327 IAC 2-1.3-4(c)
- b. Calculating deminimus for narrative criteria

3. Clarity on General Permits - 327 IAC 2-1.3-1(c)

4. Clarity on Exemptions

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- a. Mercury - 327 IAC 2-1.3-3
- b. Pollutant trading - 327 IAC 2-1.3-2-4(c)(2)(D)

5. NPDES Permit Applicability

- a. Clarify: Antidegradation Standard covers "all" activities - Implementation Procedures applicable to NPDES Permits only - 327 IAC 2-1.3-1
- b. Clarity on Ag issue
- c. Nonpoint issue
- d. Applicability to Nutrients

6. Others

- a. Public meeting - when and what addressed - 327 IAC 2-1.3-6
- b. Clarification for CWA Section 316 actions - 327 IAC 2-1.3-3(e)

7. Tributaries - Section 7(c)(1)(CC) - Identified by IDEM Staff

8. Barnes Report - Identified by WPCB

4 Recommendations (p. 29) - related to revisions of 327 IAC 5-2-11.7 for OSRWs
- *"...to make them easier for permit applicants and the public to understand and for the agency to apply."*

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Attachment #3

Email Response to Martha Clark Mettler re: Antidegradation Rule Questions

From: David Pfeifer [mailto:Pfeifer.David@epamail.epa.gov]

Sent: Thursday, August 04, 2011 2:37 PM

To: CLARK METTLER, MARTHA

Cc: Linda Holst; Heather Goss; Janita Aguirre

Subject: RE: IN antideg

Martha,

Responses to your questions. These responses reflect coordination with EPA HQ.

Question 1: Is it acceptable to EPA to restrict antidegradation implementation to NPDES actions only?

Response: In the Supplemental Information Document for the Great Lakes Water Quality Guidance, EPA says, "EPA policy is that water quality standards, including antidegradation, are applicable to any activity that might affect water quality (see "Interpretation of Federal Antidegradation Regulatory Requirement," memorandum from Tudor Davies, Director, Office of Science and Technology, to Water Management Division Directors, dated February 22, 1994)."

The key point is that the antidegradation policy and implementation procedures are water quality standards applicable to the surface waters of the state, not elements of a state's NPDES permit program. Any regulated action that is required to comply with WQS must comply with antidegradation.

While it is likely true that the majority of actions upon which antidegradation is brought to bear are NPDES permit actions, as a WQS, antidegradation applies more broadly. Any state rule that restricts the applicability of antidegradation to NPDES only would be inconsistent with the concept of water quality standards as used in the Clean Water Act and Federal regulations.

Question 2: Is it acceptable to EPA to locate Indiana's antidegradation implementation rules in the NPDES administrative rules?

Response: Antidegradation policies and implementation procedures are WQS subject to review and approval by EPA under section 303(c) of the Clean Water Act, regardless of where

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they may be located in a state's administrative rules. EPA's concern would be that locating the antidegradation rules in the NPDES administrative rules would restrict the applicability of the antidegradation rules in a way that would be inconsistent with the requirements of the CWA and federal regulations.

Question 3: Would it be acceptable to EPA if the definition of "regulated pollutants" excluded pollutants for which a criterion or value has been developed as an expression of a narrative criterion?

Response: This would not be acceptable to EPA. As part of a state's WQS, the antidegradation requirements of 40 CFR 131.12 apply broadly to surface waters to protect them from 1) any addition of any pollutant that might be added to a surface water as a result of a regulated activity that could impact an existing use, 2) lower water quality in a high quality water that is not necessary to accommodate important social and/or economic development, or 3) lower water quality in any surface water identified as an Outstanding National Resource Water (ONRW). Numeric criteria and narrative criteria identify the level of water quality that must be maintained in surface waters to protect uses and the point beyond which no further lowering of water quality is allowed. EPA considers numeric and narrative criteria to be equal and equally applicable to surface waters.